Solar Energy Technologies Systems Symposium

Sponsored by U.S. Department of Energy and Sandia National Laboratories
Sheraton Uptown, 2600 Louisiana Blvd. N.E., Albuquerque, New Mexico
October 15 - 17, 2003

Research and Development for Tomorrow's Solar Applications

Wednesday, October 15

Opening Session

Charles Hanley, Sandia National Laboratories, Symposium Chair

7:45 Coffee and Continental Breakfast

8:30 Opening Remarks
Craig Tyner, Program Manager, Sandia National Laboratories

8:35 Welcome
Raymond Sutula, Director, U.S. Department of Energy, Solar Energy Technologies Program

8:40 Welcome
Margie Tatro, Director, Energy and Transportation Security Center, Sandia National Laboratories
The Role of Solar Energy Technologies in a National Security Context

9:00 Keynote
Herb Hayden, Arizona Public Service
Bridging the Gap: R&D to Help RPS Succeed, APS Views on Bringing Solar to the Utility Market

9:30 Keynote
James Maughan, Director, Power Systems Research, GE Global Research
GE's Focus on Renewable Energy Systems Technology and Markets

10:00 to 10:30 Break

10:30 – 12:00 DOE's Systems-Driven Approach: Overview and Applications
Charles Hanley, Session Chair

Jonathan Hurwitch, Sr. Vice President, Sentech,Inc.,
DOE Solar Program's Multi-Year Technical Plan

Mark Mehos and David Mooney, National Renewable Energy Laboratory, *Developing a Systems Analysis Modeling Tool*

Scott Jones, Sandia National Laboratories; Hank Price, National Renewable Energy Laboratory, *Application of the Systems-Driven Approach to Solar Trough and Tower Technologies*

Ward Bower, Sandia National Laboratories, *Advanced Systems Concepts*

12:00 – Lunch Provided at the Sheraton
Luncheon Speaker: Larry Kazmerski, Director, National Center for Photovoltaics
"50 Years Since Bell: So What's New"
(A systems-forgiven approach to technology, roadmap, plans, and predictions)

1:30 – 3:15 Industry Perspectives on the Systems-Driven Approach
Michael Quintana, Session Chair

Dan Shugar, President, PowerLight Corporation, *Role of Benefits in Systems-driven Photovoltaic Markets*

Gilbert Cohen, Vice President of Engineering and Operations, Solargenix Energy, *A CSP Industry Point of View of DOE's Systems-Driven Approach*

Thomas Hansen, Vice President, Technical Advisor to the CEO, Tucson Electric Power, *Systems-Driven Approach: A Real World Experience*

Marc Cortez, Director of Marketing, Shell Solar Industries, *Industry Perspectives on the Systems-Driven Approach*

Chris Sherring, Vice President, WorldWater Corporation, *Extending the Systems-Driven Approach with PV to Provide Continuity of Supply in the Event of Grid Outages*

3:15 - 3:45 Break

3:45 – 5:15 Panel Discussion: Renewable and Distributed Technologies for Energy Surety
David Menicucci, Session Chair

David Menicucci, Sandia National Laboratories, *Energy Surety: What it is and How to Assess it in Real Applications*

Tarek Abdallah, Army Civil Engineering Research Center, *Considerations for Using Distributed Technologies for Energy Security in Fort Future, the Army's Prototype Fort of the Future*

Abbas Akhil, Sandia National Laboratories, *Concepts for Improving Grid Reliability with PV and Other Distributed Generation Technologies*

Valerie Rauluk, Clean Energy Corporation, *A Review of the City of Tucson's Energy Surety Program*

5:15 – 5:30 Discussion

5:30 Adjourn

7:00 pm – Banquet at the Sheraton
Craig O'Hare, Special Assistant for Renewable Energy
to Governor Bill Richardson, State of New Mexico

Thursday, October 16

8:30 – 10:00 Assessing and Improving System Performance
David King, Session Chair

David King, Sandia National Laboratories, *Power and Energy: Status of Array Design, Rating, Monitoring Methods*

Mike Pelosi, Maui Solar, *System Design and Performance Monitoring Tools*

Miles Russell, RWE Schott Solar, *Predicted and Measured Performance for 10 Similar PV Systems in Wisconsin*

Hunter Fanney, National Institute of Standards and Technology, *PV Module Testing and Modeling for Building-Integrated Applications*

10:30 – 12:00 Assessing and Improving System Reliability
Larry Moore, Session Chair

Scott Canada, Arizona Public Service; Larry Moore, Sandia National Laboratories, *Off-Grid Hybrid Systems: Maintenance Costs*

Richard Diver and Chuck Andraka, Sandia National Laboratories, *Developmental Reliability Improvement of a Dish Stirling System*

James Dunlop, Florida Solar Energy Center, *The JEA Experience with Small Grid-Tied PV Systems*

Jill Adelstein, National Renewable Energy Laboratory, *Complementing Reliability with Recommended Practices for Testing Fielded PV Systems*

12 o'clock noon – Lunch Provided at the Sheraton
Lunch Speaker: Richard King, DOE – American Solar Challenge 2003

1:30 – 3:00 Balance-of-Systems
Jerry Ginn, Session Chair

Ray Hudson, Xantrex Technology, Inc., *Inverter R&D Issues and the DOE Systems-Driven Approach Workshop*

Sigifredo Gonzalez, Sandia National Laboratories, *High Reliability Inverter Initiative*

Chuck Whitaker, Endecon Engineering, *BOS Experience in CEC PIER Projects*

John Boyes, Sandia National Laboratories, *Energy Storage and Photovoltaic*s

3:00 – 3:30 Break

3:30 – 5:15 Bringing the Technologies to Markets
Sandra Begay-Campbell, Session Chair

Sandra Begay-Campbell, Sandia National Laboratories, *The Solar Way: Empowerment for Native Americans*

John Wiles, Program Manager, New Mexico State University/Southwest Technology Development Institute, *Technical Assistance Activities to Bring the Technologies to Markets*

Bill Black and Greg Kolb, Sandia National Laboratories, *Solar Energy Assessment for Department of Defense Applications*

Ezra Auerbach, Chairman, North American Board of Certified Energy Practitioners, *Bringing Technology to Market: Developing a Solid Worker Infrastructure*

Ernesto Terrado, The World Bank, *PV for Off-Grid Electrification: Realities of the Global Market*

5:15 *Closing Remarks*
5:30 *Adjourn*